

19971129.ba v01_n802.bam.971129 v01_n803.bam.971129

>From ???@??? Sun Nov 30 12:35:47 1997
Message-Id: <199711291728.LAA05588@sco.theporch.com>
Date: Sat, 29 Nov 1997 11:28:32 CST
Subject: BOATANCHORS digest 1802

BOATANCHORS Digest 1802

Topics covered in this issue include:

- 1) 10M AM today
by W7FG <w7fgboat@w7fg.com>
- 2) Re: 390A BCB Sigs
by Ho4bart@aol.com
- 3) Re: ATTACHED FILE
by Sam Stokes <sstokes2@ix.netcom.com>
- 4) find black rubber covered ant wire ??
by Ho4bart@aol.com
- 5) Various and Sundry
by Henry van Cleef <vancleef@netcom.com>
- 6) tidbit on CD radio surplus
by Ho4bart@aol.com
- 7) Re: FS & WTB & Mouse Tragedy
by "Barry L. Ornitz" <ornitz@tricon.net>
- 8) Re: DSB VS AM
by "Barry L. Ornitz" <ornitz@tricon.net>
- 9) Re: Fwd Vd of 3B28?
by "Barry L. Ornitz" <ornitz@tricon.net>
- 10) Re: Filament care+SS rectifiers
by John Ward <ke2st@frontiernet.net>
- 11) Re: RT-3 / ARN-1
by Michael Hanz <AAFRadio@erols.com>
- 12) Question: Difference between 3B28 and 3B25?
by Jim Garland W8ZR <4CX250B@miavx1.acs.muohio.edu>
- 13) Re: cleaning out the bench
by Randy Zelick <h2rz@odin.cc.pdx.edu>
- 14) Re: Various and Sundry
by Randy Zelick <h2rz@odin.cc.pdx.edu>
- 15) Collins types typed up PTO list?
by MNHopkins@aol.com
- 16) Re: FS & WTB & Mouse Tragedy
by Lurch <lurch@TheRamp.net>
- 17) Re: Collins Tubes
by William Donzelli <william@ans.net>
- 18) Re: Filament care+SS rectifiers
by Ken Gordon <keng@uidaho.edu>
- 19) Re: tidbit on CD radio surplus

by William Donzelli <william@ans.net>
20) Re: Various and Sundry
by Ken Gordon <keng@uidaho.edu>
21) Re: R-390 info.
by Ken Gordon <keng@uidaho.edu>
22) Re: Various and Sundry
by Michael Hanz <AAFRadio@erols.com>
23) Re: Various and Sundry
by Stanley Wilson <microres@crl.com>

Date: Fri, 28 Nov 1997 23:04:19 -0600
From: W7FG <w7fgboat@w7fg.com>
To: boatanchors@theporch.com
Subject: 10M AM today
Message-ID: <199711290504.XAA18526@linux.cottagesoft.com>

Likewise 300 miles north in Oklahoma the band was good to the NW W7 & VE7.
K7IEY - Al - running 3 watts was 15 DB over S-9 at times with his vertical.
15 DB over S-9 is on a 75A-4 with 50uv for S-9. Ant here on 10 is 4 EL
on 24 ft boom at 55'. Maybe there is still hope for the band in the next
month or so.

Gary

>X-From_: owner-boatanchors@theporch.com Fri Nov 28 16:21:29 1997
>Return-Path: <owner-boatanchors@theporch.com>
>Date: Fri, 28 Nov 1997 16:20:45 -0600
>Reply-To: w5sum@ms1.nwla.com
>Sender: owner-boatanchors@theporch.com
>From: Ronnie Hull <w5sum@ms1.nwla.com>
>To: Old Tube Radios <boatanchors@theporch.com>
>Subject: 10M AM today
>X-Sender: w5sum@ms1.nwla.com
>X-Listprocessor-Version: 8.1 -- ListProcessor(tm) by CREN
>

>I was monitoring 29.0 all day today. I heard quite
>a bit of activity, and even worked a few stations
>myself. Seems the fellow on the northwest coast
>of US had a field day, with openings to all corners
>of the states. I heard them working 0's,9's,8's, but
>I could here none of these. I am in Shreveport, La, and
>heard not a peep out of the east coast or florida today.
>
>

>

>

>=====

> Ronnie Hull

>

>=====

 \succ \succ

W7FG Vintage Manuals Telephone: 918-333-3754
3300 Wayside Drive Orders Only: 800-807-6146
Bartlesville, Oklahoma 74006 HomePage: <http://www.w7fg.com>
Direct E-Mail: w7fg@w7fg.com

[illegible]

From: Ho4bart@aol.com

Subject: Re: 390A BCB Sigs

In a message dated 97-11-28 08:57:07 EST, hamradio@mm1001.theporch.com writes:

>

of course this set doesn't tune MW, but the idea is still true.

From: Sam Stokes <sstokes2@ix.netcom.com>

To: PLT1032@aol.com

Cc: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: ATTACHED FILE
Message-ID: <347FAA04.B50A6857@ix.netcom.com>

PLT1032@aol.com wrote:

> Can anyone identify this equipment?

>

> Bob Lindgren

>

> -----
> [Image]

Believe that is a radio altimeter

Date: Sat, 29 Nov 1997 00:56:44 -0500 (EST)
From: Ho4bart@aol.com
To: boatanchors@theporch.com, wlhoward@gte.net
Subject: find black rubber covered ant wire ??
Message-ID: <971129005644_-2094908071@mrin41.mail.aol.com>

an acquaintance wants to replicate for a WW2 military radio display,
a lookalike for the "3 mm rubber covered" antenna wire
(probably black) specified in the original setup.
i suggested test equipment lead wire.
yes it is quite pricey
but for a display you would not have to go the whole 100 ft
as in the field setup,
the wire can just run off the set
into the background.
or you could have 25 ft or so spooled
and no one would know this wasn't the regulation spool size.

have you a more practical idea,
and / or can you suggest
a seller of test-lead wire in not-short lengths??
any input greatly appreciated!!
hue miller

Date: Fri, 28 Nov 1997 22:45:25 -0700 (MST)

From: Henry van Cleef <vancleef@netcom.com>
To: boatanchors@theporch.com
Subject: Various and Sundry
Message-ID: <199711290545.VAA09365@netcom6.netcom.com>

I keep trying to respond to a bunch of topics and getting locked off this system. Right now I am baby-sitting some test runs of a Yamaha CD-450 CD player that has its covers off and has gotten some attention on acct. it was skipping all the time. Yeah, I do IC's. I got the manual for it, so know how to set the tweaks (a tough job, not for the faint-at-heart). It's playing through a 1966 Wollensak reel-reel tape deck's amps. That got silicon output transistors in place of the original geraniums, as well as a completely redone power supply. Yeah, I do transistors. All supposedly off-topic around here, but if you're gonna play electronics, you get to play this stuff too.

On repair of point to point-wired equipment, I am a stickler for 100% replacement of any component I change, leads and all. A good temp-controlled iron, solder sucker, some soldering aid picks, needle nose pliers (real skinny type) and small and sharp side cutters, plus having taken the time to develop the skill needed to disassemble things without breaking them, and I think it is just as easy to "do it right" as to do shortcuts. I've uncovered so many other problems that needed fixing when replacing components, that I don't see any sense at all in doing things any other way. Like Bobbi Barmore's TV transmitter, I expect my electronics equipment to work "like new" after I'm done with it. The real adventures I've had have been with items bought at hamfests and fleamarkets where I opened them up to find paste-in repairs and mods that were published in some of the ham magazines that were simply copied without considering that the unit had different circuits than would work with the mod as published----along with a ton of solder on joints, some of it cold, etc. If I see good clean work, I am looking at something done by a professional attitude, if not a professional person.

You can take the covers off anything I've got here and inspect. You may not like modern mylar capacitors, film resistors, etc., but I don't have to run and hide while you discover that it looks as though the thing were built that way in the first place. And when you get through looking, we'll plug in its 3 wire power cord, and let electricity run through the fuse that was added (I am allergic to component smoke), and you can put it through its paces with a thorough bench test, and discover that the thing really works, just as it did fifty or sixty years ago.

If I haven't got objectives like these, then why am I playing with the ancient stuff? Nobody is paying me for this, it's a hobby. And a part of that hobby is taking the time to do it right.

On modifications, the first question I ask is "why." The moment you modify a piece of equipment that was designed by professionals and put into series production, you're starting your own company. There are some circuits in some boxes that need attention, but for the most part, all you are doing fiddling with somebody else's design is exhibiting the worst of the NIH factor (not invented here). You want to do design, do one of your own, rather than screwing up somebody else's good work. Doing design from cold is easier than reworking somebody else's design, and in things like radio receivers, you are not going to make any serious change without having to review every single part of the rest of the design to determine what balances you've upset. A standing joke among my elders and betters when I was a young engineer was articles on "how to make a radio out of an S-40." Considering that Bill Halligan hired some of the best talent around and paid them plenty to be thorough, there is very little you are going to change in any of the Hallicrafters radios I've seen that is going to do anything but make them poorer, and that includes the S-38. And if you think that Halligan was the Mad Man Muntz of ham radio, take a good look at the S-38 schematic, and notice the extra resistors in the power supply, including the 35Z5 plate feed shunt, and take a look at those squeal stoppers in the S-40 6SG7 grid circuits.

Sure, I do mods. When replacing germaniums with silicones, you've got about half a volt difference in base-emitter voltage, and have to consider what that's going to change. And the RME-45 needed a power transformer, and got one that had 45 more volts coming out of it, in a set that was already over-volted and something of a drifty hotbox. So I redid the whole B+ setup. That meant resetting screen voltages, redoing the output tube bias, and a whole lot of other stuff. It also meant a day spent chasing a parasitic oscillation as well. You wannabe a design engineer, you're gonna chase parasitics and other nasty side effects. And you're gonna wear out your Terman and other texts. The ARRL handbook is not an engineering text. Nor is the Radiotron Designer's Handbook.

Replacing 5U4's and 80's with silicon diodes? Once again, why. I hadn't heard that either tube type was scarce. Sure, you can do it if you really feel you must. HP in their 200CD oscillator went from a 5Y3 to a 5AR4 and then to silicon diodes---in how many years of production? The 5Y3 units work as well as any, and HP's literature indicates that you can use a 5Y3 in the 5AR4 units (they must have gotten a buy on those toobs). On the 200CD, an afternoon spent replacing the black striped caps on the older units----which means not only a bunch of mylar caps (and use new resistors, while you are at it), but some terminal strips to do a really neat workmanlike job---will produce a nice-running 200CD, complete with 5Y3.

Vacuum tube high end audio? I built a transistor audio amplifier in 1962 and was shocked at its performance compared to good tube equipment. Hum, distortion, phase shift, noise, etc. were non-existent compared to toob iron, and it didn't give off enough heat to heat a house in Maine on a cold day. There's a lot of witchcraft out there on the subject of audio. The serious work was done by Helmholtz in the 1860's (On the Sensations of Tone), and the Bell labs and Victor Talking Machine Co. work of the 20's and 30's, with Harry Olson of RCA doing what is still the definitive work on electronic audio reproduction.

There are a few HF tube radios that had first-class audio, both for their time, and even today. I think the Hallicrafters S-27/S-36A "Ultra High Frequency" sets, which just happen to get FM and have a genuine limiter-discriminator setup, are real standouts. The SX-28/A had the same audio circuit, less the feedback loop. National's NC-200 series had respectable audio as well. One small point not to ignore---all of these sets had IF's with broad and narrow passbands. The early Hammarlund SP's had similar setups (and quality audio), using adjustable physical spacing in the IF's to control bandpass. The typical set built for ham use, without broadband IF's, is simply too narrow to give serious high audio quality. They are made for CW and voice.

If you want to look at good conservative "high fidelity" voltage amplifier designs, the vertical amp circuits in Tek scopes of the late fifties and early sixties are genuine "high fidelity." Flat from DC to several Mhz., no phase distortion, intermodulation distortion, etc. Amps of this type are generally called "video amplifiers" because serious broadband design was first done for television video in the thirties. The hi-fi crowd insist, for the most part, that these aren't "audio amplifiers" and won't give "good sound," whatever that is. And you can ignore all the bushwah about green pens, oxygen free cables, bugleboy tubes, etc. etc. etc. If you want good design info, go to Terman and his colleagues, or to Harry Olson---primary research that was done long before yuppies were invented.

Well, this CD player hasn't skipped yet, so I might as well put the covers back on it and see if that changes anything.

--

=====
Hank van Cleef
=====

Date: Sat, 29 Nov 1997 02:22:51 -0500 (EST)
From: Ho4bart@aol.com
To: boatanchors@theporch.com
Subject: tidbit on CD radio surplus
Message-ID: <971129022251_1139976140@mrin83.mail.aol.com>

i also learned later that in some areas (not washington, maybe montana or california) some USNavy field portable TBW transmitters 0.2-0.6 and 3-18 mc/s were salted away in the CD caches. i think these came out in the last 10 years? there were also supplies of crackers (i mean eatables, lest there be any confusion) and painkiller drugs, these were broken into and stolen by drug enthusiasts.
hue miller

Date: Sat, 29 Nov 1997 02:19:52 -0500
From: "Barry L. Ornitz" <ornitz@tricon.net>
To: "Boatanchors Mailing List" <boatanchors@sco.theporch.com>, <ARONGV@aol.com>
Subject: Re: FS & WTB & Mouse Tragedy
Message-ID: <01bcfc97\$2f9fe300\$LocalHost@ornitz.tricon.net>

Ron and the group,

I have been out of town for a week and did not get to answer your earlier question about cleaning after mice... yeeech!

First, I hope you read the warning about Hanta virus and such. Other things to worry about, although not quite as bad, are histoplasmosis and various mold spores. Whatever you do, avoid anything that will cause the dirt/dust/dried junk to become airborne.

For the first pass in cleaning, I would suggest Dow foaming bathroom cleaner. Thoroughly wet EVERYTHING. The foam will tend to kick up less dust than most other cleaners. It will wet the droppings thoroughly. Let this soak for ten minutes and repeat. Rinse with running water. At this point, most of the virus/mold spores will have been killed or rendered inactive. Now you can begin scrubbing with a brush using warm soapy water and be fairly safe. Just wear rubber gloves. The glycol ethers in the foaming cleaner do a good job of removing dirt and oil, but they will damage electrolytic capacitors if left to soak in too long. Of course, the capacitors will likely have to be replaced anyway. The Dow cleaner is probably safer than Lysol (orthophenyl phenol in alcohol solution) on most plastic parts; it is almost as good a disinfectant and it does not kick up a harmful dust from the droppings.

Rinse well with warm running water and follow with another rinse using distilled or deionized water. Dry the radio in warm air for at least a week before attempting to apply power. Critical bearings and such can be oiled before the drying period to prevent rust or seizing.

>As for the thread I innocently started on cleaning mouse droppings and
>wettings, I didn't get two guys to agree on what's best to clean up a BA
>chassis when it's been a mouse bathroom to generations of the critters. So
>far what seems to be working best for me is an auto cleaner product made by
>Turtle Wax for getting bugs and road tar off your car's paint.
>Ron W00IZ Kansas City

Date: Sat, 29 Nov 1997 02:21:05 -0500
From: "Barry L. Ornitz" <ornitz@tricon.net>
To: "Boatanchors Mailing List" <boatanchors@sco.theporch.com>,
"W6WUH Larry" <rau@wco.com>
Cc: "Barry L. Ornitz at Eastman" <ornitz@eastman.com>
Subject: Re: DSB VS AM
Message-ID: <01bcfc97\$5bd24760\$LocalHost@ornitz.tricon.net>

I have been gone all week, so I apologize for a late reply to this. I am surprised no one corrected Larry here.

-----Original Message-----
From: W6WUH Larry <rau@wco.com>
To: boatanchors <boatanchors@theporch.com>
Date: Monday, November 24, 1997 02:12 PM
Subject: DSB VS AM

>Seems to me most of the "phasings problems" described as objectionable in
>DSB operation are what I am hearing in AM.... or is isn't P:C: to mention
>that ?

The problems of multipath distortion are what are causing the problem, but they can be corrected with synchronous detection of either AM or DSB.

>I mean come on... we live with this all the time as multi-path phase
>distortion. and I don't think the phase relationship between a side band
>and the carrier makes a hoot of difference.. it is phase distortion
>between the two sidebands that drives you nuts...

It certainly does make a difference, Larry. Proper detection requires that the carrier and both sidebands be in both the proper amplitude and phase relationship. This is why DSB with reduced carrier is not compatible with an envelope detector. Look in any book on communications theory for details. Terman has a good discussion of this and Everitt's "Communications Engineering" goes into detail.

>i mean we know the
>carrier doesn't carry any information.. which is why we can suppress it in
>ssb and still receive intelligence on the other end...

The carrier may not carry information, but it must be there for proper detection. With SSB, the phase relationship does not have to be perfect for voice reception. But it certainly does for music or anything where the original phase relationships must be retained, like multiplexed FAX and RTTY streams.

>nor is there any way
>to insure "phase synchronization" of reinserted carrier..

Phase synchronization is a simple problem with DSB. All of the phase information is there in the two sidebands. Look up any of Costas' articles from the 1950's. Squaring the signal (multiplying it by itself) generates a signal at twice the carrier frequency. In a normal Costas loop, a local oscillator is phase-locked to this reference frequency.

>it is only a
>matter of reinserting a clean undistorted carrier...of the right
>frequency...and the instantaneous phase means bupkis so long as it remains
>stable.

Larry, I hope you can provide a single reference for this statement from a valid source. It is simply not true. ANY phase deviation in the reinserted carrier will result in distortion with DSB. Do the math. It is really pretty trivial. If what you are saying were true, there would be no need for all the fancy quadrature detection schemes in modern digital signal processing.

>Multipath distortion is a possibility which is present with full or
>suppressed carrier, DSB ..remember full carrier DSB IS AM (and so is SSB)
>
>No ?
>
>Larry W6WUH

With AM or DSB, it is possible to regenerate the carrier in the proper phase relationship. This is possible with SSB only if vestigial sideband transmission is used or a pilot carrier is inserted. Synchronous detectors

can do wonders with multipath distortion.

BTW, for those interested, I can provide a copy of Costas article from the IEEE Journal that also contained the great articles by Kahn and Weaver (the special SSB issue).

73, Barry L. Ornitz WA4VZQ ornitz@tricon.net

Date: Sat, 29 Nov 1997 02:24:08 -0500
From: "Barry L. Ornitz" <ornitz@tricon.net>
To: <boatanchors@theporch.com>, "Mike Maloney" <ac5p@ionet.net>
Cc: "Barry L. Ornitz" <ornitz@tricon.net>
Subject: Re: Fwd Vd of 3B28?
Message-ID: <01bcfc97\$c82720c0\$localhost@ornitz.tricon.net>

The forward drop of a 3B28 is not much different from that of a mercury vapor rectifier, about 10 to 15 volts. This is not significantly different from the forward drop of a set of series connected silicon diodes (about 10 to 15 diodes in series)

.
>Has anyone measured or know the forward voltage drop of a 3B28 Hi-vac
>rectifier? This energy I suppose is lost from the HV filter output,
>wasted as heat?
>
>73/Mike ac5p

Date: Sat, 29 Nov 1997 03:11:09 -0500
From: John Ward <ke2st@frontiernet.net>
To: boatanchors@theporch.com
Subject: Re: Filament care+SS rectifiers
Message-ID: <v03102808b0a57c071a46@[209.130.130.234]>

>In a message dated 97-11-02 17:00:15 EST, rau@wco.com writes:
>
>> What tubes don't like is being called upon to deliver power from
>half warmed filaments...or put another way, running your filaments
>at below the rated voltage decreases the filament life...>

hue miller writes:

>this may be true for great big power toobs, but i wager this doesn't
>apply to receiving tubes. think about this example, 6BA6 run at lower
>fil current, just less transconductance, less rig sensitivity, and.....the
>toob will last a lot longer.

This caution only applies to tubes with thoriated tungsten filaments, such as 833's or 810's. They need to be hot enough to keep fresh thorium boiling to the filament's surface, or their emission goes to pot. Oxide coated filaments or cathodes don't have the problem, they can be run at half voltage with no damage (but poor performance).

John, KE2ST

Date: Sat, 29 Nov 1997 09:12:18 -0800
From: Michael Hanz <AAFRadio@erols.com>
To: PLT1032@aol.com
Cc: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: RT-3 / ARN-1
Message-ID: <34804CF2.5CAD@erols.com>

PLT1032 wrote:

> Is anyone familiar with this WWII instrumentation?

It's a WWII FM radar altimeter, Bob, using a pair of antennas to read altitude above terrain and provide altitude info for the C-1 automatic pilot. There are a couple of conversion articles on it, but with a little 6J6 final, it's just about up to the task of communicating with your neighbor next door. The antennas, limit switch, and altitude indicator are more difficult to find than the basic transceiver. There was a later version produced (AN/APN-1) that extended the altitude range by a factor of five or so using the same AT-6 antennas.

73,
Mike Hanz KC4TOS
Herndon, VA
AAFRadio@erols.com

Date: Sat, 29 Nov 1997 09:21:57 -0400
From: Jim Garland W8ZR <4CX250B@miavx1.acs.muohio.edu>

To: boatanchors@theporch.com
Subject: Question: Difference between 3B28 and 3B25?
Message-ID: <v03102805b0a5c6ebe3ea@[134.53.65.12]>

Hi Gang,

I bought several 3B28s recently, to have as spares, and the seller inadvertently included a 3B25 in the batch. (The tubes look nearly identical, and the numbers were hard to read.) Could someone tell me the difference between the tubes? Thanks,

Jim Garland W8ZR

Date: Sat, 29 Nov 1997 07:13:21 -0800 (PST)
From: Randy Zelick <h2rz@odin.cc.pdx.edu>
To: "Benjamin D. Hall" <bdhall@ghg.net>
Cc: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: cleaning out the bench
Message-ID: <Pine.PTX.3.91.971129070319.16352B-100000@odin.cc.pdx.edu>

Hmm,

Well Ben's post on wanting to unload HV fuses jogged my memory about a similar piece of cr... uh, really fine stuff I accumulated once upon a time. This is a set of four very high voltage test cables. One pair has super jumbo spade lugs at one end and equally large alligator clips at the other. The second pair has something I forget at one end and what appears to be a couple of banana plugs on steroids at the other. The cables are pretty good length (maybe 6 feet) with smallish wire but around 3/8" diameter rubber insulation. Consequently they are very floppy. They are in good condition with no apparent insulation cracks.

Happy to make this an early Chanukah/Christmas present to a needy KVer; you pay the postage.

Cheers,

=Randy=

R. Zelick
Dept. Biology
Portland State University
P.O. Box 751
Portland, OR 97207

503-725-3086 (voice), 503-725-3888 (fax)
email: h2rz@odin.cc.pdx.edu
web: <http://odin.cc.pdx.edu/~h2rz/>

Date: Sat, 29 Nov 1997 07:52:10 -0800 (PST)
From: Randy Zelik <h2rz@odin.cc.pdx.edu>
To: Henry van Cleef <vancleef@netcom.com>
Cc: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Various and Sundry
Message-ID: <Pine.PTX.3.91.971129074206.16352D-100000@odin.cc.pdx.edu>

HI Hank and the group,

About modifications to existing designs... I really respect your opinion on this, and for the most part I would agree. Nevertheless, I think it is unwise to have what I would consider to be an extreme position, and surely to make a blanket statement. We all know that there are bad designs out there which went into production. Sometimes for cost-cutting and sometimes just "because". Why not try to fix some of these, even if you are not the world's best design engineer?

My lovely RBB receiver has a capacitor across the primary of the audio output transformer to restrict the bandwidth of the audio. It was installed by the factory according to the bright engineer who knew exactly what he was doing. I cut it out. Now the RBB sounds better.

Sometimes I make small mods which don't work out. Do I regret it? Nope. Why not? It was *fun*.

Cheers,

=Randy=

R. Zelik
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P.O. Box 751
Portland, OR 97207
503-725-3086 (voice), 503-725-3888 (fax)
email: h2rz@odin.cc.pdx.edu
web: <http://odin.cc.pdx.edu/~h2rz/>

Date: Sat, 29 Nov 1997 10:52:22 -0500 (EST)
From: MNHopkins@aol.com
To: Boatanchors@theporch.com
Subject: Collins types typed up PTO list?
Message-ID: <971129105221_-422379174@mrin85.mail.aol.com>

Has anyone compiled a definative list of the Collins PTOs?

Electric Radio once had a 13 entry list, but it could not have been complete as it did not include the 70E-3, which I learned later is from a ARR-15, whatever that is. I bought these for 50 cents each and found them to operate below the BCB.

73 de ab5L, michael in dallas, student of Tecraft and International (ICM) ham products and mementoes of Six Meters' Golden Age: 1957-58
Michael Hopkins
Box 226841
Dallas, TX 75222 MNHopkins@AOL.com

Date: Sat, 29 Nov 1997 09:59:33 -0600
From: Lurch <lurch@TheRamp.net>
To: boatanchors@theporch.com
Subject: Re: FS & WTB & Mouse Tragedy
Message-ID: <3.0.5.32.19971129095933.00836820@mail.TheRamp.net>

Barry Ornitz' suggestion of Scrubbing Bubbles fits; the same active ingredients (n-alkyl dimethyl ethyl benzyl ammonium chlorides) in a higher concentration are what's in Johnson Wax Virex (tm) Tb which is one of the approved cleaner/disinfectants for Baxter Fenwal's plasmapheresis equipment. In the years I worked for Baxter Healthcare refurbishing these beasts, Scrubbing Bubbles was the cleaner of choice, and although it may slightly lighten certain paints (most notably polyurethane epoxy enamels) I have found it to be an excellent all-around BA cleaner.
BES URE TO RINSE THOROUGHLY AS IT LEAVES A RESIDUE WHICH IS CORROSIVE TO BARE ALUMINUM!! BUT WHICH RINSES RIGHT OFF WITH PLAIN OL' WATER.

73 de ka9egw

Date: Sat, 29 Nov 1997 11:15:52 -0500 (EST)
From: William Donzelli <william@ans.net>
To: Old Tube Radios <boatanchors@theporch.com>

Subject: Re: Collins Tubes

Message-ID: <Pine.GS0.3.96.971129111356.28752A-100000@titan.purch.ans.net>

> I have seen pictures of 810's with the Collins logo and wonder who made
> these tubes for Collins - RCA?

>

> Do others have such tubes in their collection? Any assistance would be
> appreciated.

I have an 866 (866A?) with the meatball logo. It also has a very obvious
datecode "OCT-1941". I have also seen an 807, but it was too expensive to
purchase.

William Donzelli
william@ans.net

Date: Sat, 29 Nov 1997 08:33:40 -0800 (PST)
From: Ken Gordon <keng@uidaho.edu>
To: John Ward <ke2st@frontiernet.net>
Cc: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Filament care+SS rectifiers
Message-ID: <Pine.BSF.3.95.971129081944.5564B-100000@piobaire.mines.uidaho.edu>

This probably is a good place to mention this:

I once read in an old radio handbook somewhere the following method of
resurrecting "flat" tubes which had thoriated tungsten filaments, "flat",
in this case, meaning those tubes which no longer will provide full power
output or draw rated current due to low filament emission:

1) Apply 2.5 times normal filament voltage for one minute. (Having done
this to a batch of flat 304TLs once, I would suggest you bring the voltage
up slowly).

2) Reduce voltage to 1.5 times normal filament voltage and hold for one
hour.

In my case, I was given a dozen VERY well used 304TLs which had been used
in a Nuclear Magnetic Resonance instrument as shunt regulators by our
Chemistry Department. These tubes had been run so hard for so long that
there was a brown residue on the INTERIOR of the glass envelope shaped
like the normal holes in the plates. None of the tubes in question would
draw more than about 100 ma at 3Kv, and several glowed blue as though they
had some sort of gas inside them.

Since the transformer I had available would not provide the necessary current for very long, I immersed it in a large bucket of distilled water. Although the water became quite hot after resurrecting each tube, and I replaced the distilled water after each run, it was not damaged.

In any case, I managed to successfully resurrect every 304TL and passed most of them on to friends for use in linears. I used two for my own amp and they provided full output for a number of years after this episode.

I do remember my feeling of expecting to see the filament give up with a very bright flash, and was most amazed when they didn't.

Ken W7EKB

Date: Sat, 29 Nov 1997 11:36:21 -0500 (EST)
From: William Donzelli <william@ans.net>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: tidbit on CD radio surplus
Message-ID: <Pine.GS0.3.96.971129112923.28752B-100000@titan.purch.ans.net>

> i also learned later that in some areas (not washington,
> maybe montana or california) some USNavy field portable
> TBW transmitters 0.2-0.6 and 3-18 mc/s were salted
> away in the CD caches. i think these came out in the
> last 10 years? there were also supplies of crackers (i mean
> eatables, lest there be any confusion) and painkiller
> drugs, these were broken into and stolen by drug
> enthusiasts.

About 2 years ago, a bunch (18) of TDZ transmitters came to light in a CD stash in New Jersey. The building they are in was slated for destruction (it is probably gone now), so most of the beasts are probably buried now.

William Donzelli
william@ans.net

Date: Sat, 29 Nov 1997 08:51:13 -0800 (PST)
From: Ken Gordon <keng@uidaho.edu>
To: Randy Zelick <h2rz@odin.cc.pdx.edu>
Cc: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Various and Sundry
Message-ID: <Pine.BSF.3.95.971129084209.5564F-100000@piobaire.mines.uidaho.edu>

> HI Hank and the group,
>
> About modifications to existing designs... I really respect your opinion
> on this, and for the most part I would agree. Nevertheless, I think it is
> unwise to have what I would consider to be an extreme position, and
> surely to make a blanket statement. We all know that there are bad
> designs out there which went into production. Sometimes for cost-cutting
> and sometimes just "because". Why not try to fix some of these, even if
> you are not the world's best design engineer?

An extreme example of "bright, young, inexperienced design engineer syndrome" in MY humble opinion is the AN/SRR/FRR series of receivers, which use submini tubes: nearly every stage in these otherwise fine receivers connect the screens directly to the plate voltage source. These sets run VERY hot and tube life is short.

In the several sets I worked on for a man doing propagation research, I installed properly bypassed 50 k resistors in the screen supply of every tube which needed it. Result: much cooler operation; never replaced another tube in the 3 years the receivers ran continuously; sensitivity appeared to remain the same.

Although I am sure the original design team had some legitimate purpose in mind when they/he designed it the way it was done, nevertheless the final result was NOT very reliable.

Was I wrong to do this? I think not.

Ken W7EKB

Date: Sat, 29 Nov 1997 08:57:52 -0800 (PST)
From: Ken Gordon <keng@uidaho.edu>
To: boatanchors@sco.theporch.com
Subject: Re: R-390 info.
Message-ID: <Pine.BSF.3.95.971129085527.6029A-100000@piobaire.mines.uidaho.edu>

For those of us who own and operate or would like to get operating our R-390/R-390A receivers, the following might prove useful:

www.findmail.com/listsaver/r-390/

Everything is hyperlinked and I have found this to be MOST useful.

Now, if I just had the necessary time to get my R-390 (non-A) back in

operation.

Ken W7EKB

Date: Sat, 29 Nov 1997 13:04:35 -0800
From: Michael Hanz <AAFRadio@erols.com>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Various and Sundry
Message-ID: <34808363.7563@erols.com>

Randy Zelick wrote:

> About modifications to existing designs... for the most part I would
> agree. Nevertheless, I think it is
> unwise to have what I would consider to be an extreme position, and
> surely to make a blanket statement. We all know that there are bad
> designs out there which went into production. Sometimes for cost-cutting
> and sometimes just "because". Why not try to fix some of these, even if
> you are not the world's best design engineer?

Well, I only saw two blanket or extreme statements in Hank's soliloquy:

"There are some circuits in some boxes that need attention..." and

"...you are not going to make any *serious* change without having to review every single part of the rest of the design to determine what balances you've upset." (my emphasis added)

All I took from that was that mods are okay as long as you take the time to figure out what you're doing and why. Take a look at the WWII mil modification articles in most of the ham magazines and you don't often see much in the way of measurement to show how much improvement there was. Some of them, like the infamous 1946 article on the BC-375, were downright false in their conclusions. There's nothing wrong with trying a different cap (or none) on the audio transformer primary, but it might be even more interesting to understand why it was there in the first place, which involves some measurements and/or calculations. I've made my share of "try it, you'll like it" two minute mods, and while I may have considered the result to be an improvement, later measurements often showed I was deluding myself, for reasons I won't get into in deference to the audio enthusiasts (of which I am one). I think that's the point Hank really was making. Modify away!...but get a good copy of Terman's.

73,

Mike Hanz KC4TOS
Herndon, VA
AAFRadio@erols.com

Date: Sat, 29 Nov 1997 09:12:02 -0800 (PST)
From: Stanley Wilson <microres@crl.com>
To: Ken Gordon <keng@uidaho.edu>
Cc: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Various and Sundry
Message-ID: <Pine.SUN.3.91.971129085913.5872A-100000@crl5.crl.com>

There are design engineers and then there are design engineers. All do not have the same skill.

I have made a living for the past 12 to 15 years fixing what I can design problems. The companies normally called them Quality COntrol problems. It often requires a 10% return of product before it gets fixed.

The size of the company has nothing to do with the quality of the design. Only in the number of returns due to bad design. One area that I notice the most problems is in the power supply. It seems that theis area is often an after thought or given to the engineer with the least experience.

I have seen the outputs of CMOS gates tied together. Parts added that were not needed and parts left out that were needed. Heat is the first indication of many problems.

I have seen failure rates coming off of production lines at a 20% level. Once I told an owner that he could expect every one to be returned. His solution was to sell the plant to another firm. I was called back in and they dropped the product and eat the losses. The engineers often move on to another plant or into a non-design job.

So when you find a problem - why not fixed it. Would one drive a car with one tire flat because it was that away when you got in it. The same goes for an electronic problem and or mechanical one.

At one plant they had a large sign that stated only "Quality products were shipped". I was called in because the paint was falling off of the finished product. The had three railroad box cars of product returned. The foreman told me he had to shipp so much product by a certain date and he could only meet the shipping date if he did not do the metal primer.

de stan ak0b

End of BOATANCHORS Digest 1802

>From ???@??? Sun Nov 30 12:36:36 1997
Message-Id: <199711300452.WAA20138@sco.theporch.com>
Date: Sat, 29 Nov 1997 22:52:10 CST
Subject: BOATANCHORS digest 1803

BOATANCHORS Digest 1803

Topics covered in this issue include:

- 1) Mental Wanderings.
by Spencer Petri <spetri@e-tex.com>
- 2) RE: RT-3 / ARN-1
by Ragnar Otterstad <otterstad@inet.uni-c.dk>
- 3) Re: Various & Sundry & Real Life
by "Don L. Davis" <dxguy@earthlink.net>
- 4) Pix file - RT-3/ARN-1
by "Thomas A. Adams" <103360.2133@compuserve.com>
- 5) FS/FT: KWT-6/URC-32 stuff
by Brian.Harris@sv.sc.philips.com (Brian Harris)
- 6) German Receiver ident ??
by BEN NOCK <G4BXD@compuserve.com>
- 7) Tube tester Fil Voltage
by "W6WUH Larry" <rau@wco.com>
- 8) out 'til 12/3
by don merz <71333.144@compuserve.com>
- 9) To Modify Or Not To Modify
by Scott Robinson <spr@earthlink.net>
- 10) Re: Don't Modify Morrow's
by "W6WUH Larry" <rau@wco.com>
- 11) R-390 BCB PROBLEMS
by JOHN_SEHRING.parti@ecunet.org (JOHN SEHRING)
- 12) FS: ME-9B/U
by "Herbert M. Rosenthal" <herbrose@lobo.net>
- 13) Re: R-390 BCB PROBLEMS
by Dan Martin <dmartin@visuallink.com>
- 14) WTT SB-101
by "Allan Fritsche" <fritsche@classic.msn.com>
- 15) Modding the BA's
by "Allan Fritsche" <fritsche@classic.msn.com>

- 16) The recent to modify or not to modify thread...
by bdhall@ghg.net (Benjamin D. Hall)
- 17) Tubes FS
by Robert Lawson <lawson_r@popmail.firn.edu>
- 18) Gonset Communicator P.S. Diagram
by John England <jengland@mail.tds.net>
- 19) Re: To Modify Or Not To Modify(or just fix the damn thing)
by Edward Zeranski <ejz@nosc.mil>
- 20) kill the heater to QSY?
by MNHopkins@aol.com
- 21) Collins 'Joes know PT0s
by MNHopkins@aol.com
- 22) Antenna Tuner Help Needed
by George Humphrey <gah@koyote.com>
- 23) Heath IB-1100 info needed
by Thomas Bowes <bowes@tir.com>
- 24) transformer question
by dave metz <metzd@cfw.com>
- 25) VIKING MODS- ROAD TO HELL
by "W6WUH Larry" <rau@wco.com>
- 26) Re: Pix file - RT-3/ARN-1
by kim herron <kherron@vixa.voyager.net>
- 27) Question aboaut T-4XB
by "Jim Zellmer" <zellmer@raccoon.com>

Date: Sat, 29 Nov 1997 16:50:09 -0600 (CST)
From: Spencer Petri <spetri@e-tex.com>
To: boatanchors@theporch.com
Subject: Mental Wanderings.
Message-ID: <199711292250.QAA10863@sco.theporch.com>

Hello Heavyweighters,

I bet a 3-200/592A would make a nice Hartley. Sure would look nice sitting on a board.

Finally got my tower work completed and the VHF/UHF antennas in place. The last couple days I've been working on some HF antennas and hope to get something up before long.

Got the delapidated 10 meter J repaired and ready to go up. Also built 70' of ladder line with genuine ceramic spreaders and Nr. 14 stranded copper. Looks good. Bet a 80 meter doublet will tune great with the Johnson matchbox. Got the ladder line and doublet ready to go up. Couldn't do it today because of the high winds locally, didn't want to hang off the tower like a flag. I did discover that I need a pulley to let the doublet down.

There were already pine needles hanging in the ladder line, which was stretched between the tower and a building.

I've built some rotary coax switches using the TU unit big ceramic switches and coffee cans with a piece of doublesided copper clad soldered on the open end of the cut down can. Painted black, these look like they oughta. They look good RF wise into a dummy load. Anyway I plan to have one switch on the rxs and one switch on the txs so I can select the various heavyweights to the T/R relay. Also will have to have a couple rotary switches to select the keying of the various txs/rxs.

I'm making a little progress anyway and should be on the air with BAs before to long, maybe.

73 de Pete WA5JCI EM21 "the future will be better tomorrow"

.....
6 Mtr -- WAS #490, WAC CW, DXCC/91 Countries, VUCC #361/626 Grids
.....
2 Mtr -- 36 States -- VUCC #346/183 Grids

Date: Sat, 29 Nov 1997 17:37:49 -0000
From: Ragnar Otterstad <otterstad@inet.uni-c.dk>
To: "'AAFRadio@erols.com'" <AAFRadio@erols.com>,
Old Tube Radios
Subject: RE: RT-3 / ARN-1
Message-ID: <01BCFCED.8ED1E3E0@lgb192.ppp.uni2.dk>

-----Original Message-----
From: Michael Hanz [SMTP:AAFRadio@erols.com]
Sent: Saturday, November 29, 1997 5:12 PM
To: Old Tube Radios
Subject: Re: RT-3 / ARN-1

PLT1032 wrote:
> Is anyone familiar with this WWII instrumentation?

It's a WWII FM radar altimeter, Bob, using a pair of antennas to read altitude above terrain and provide altitude info for the C-1 automatic pilot. There are a couple of conversion articles on it, but with a little 6J6 final, it's just about up to the task of communicating with your neighbor next door. The antennas, limit switch, and altitude indicator are more difficult to find than the basic transceiver. There was a later version produced (AN/APN-1) that extended the altitude range by a factor of five or so using the same AT-6 antennas. This sounds like the equivalent of the Luftwaffe FUG 101.

73 Rag OZ8RO

Ragnar Otterstad

Collector of German WW2 electronics, clandestine sets all periodes, Cipher equipment

Date: Sat, 29 Nov 1997 16:00:41 -0800
From: "Don L. Davis" <dxguy@earthlink.net>
To: boatanchors@theporch.com
Subject: Re: Various & Sundry & Real Life
Message-ID: <3480AC81.1D@earthlink.net>

Interesting thread re: re-designing circuits & "non-standard" repairs.

I don't understand all of the ire from either side, for either topic. I am an engineering manager in a large, successful aerospace company, and our products are among the best in the world. I have a professional staff of about 40 folks who are tops in their field (DC-DC switch-mode power conversion). I have PhDs working for me who "wrote the book" in this field (literally). There are some days, however, when I look at someone's work & think "I could have done that better", or "Joe Blow would have done a more creative telemetry interface". Do I re-design it? Do I have the best man in the lab do every circuit? No. It's a business, and good enough is good enough.

Wow! There it is. The oil of capitalism! I'm sure to get flammed for that thought. "Why, we did it perfectly at Collins 50 years ago. We had engineers that knew twice what these silicon boys do now-a-days." Etc., etc., etc.... Well. guess what? they did it JUST the same way back then. If you were ONE man working for a company that had 100 or 200 folks on the payroll, you had deadlines & schedules & a family to raise

& bills to pay. I guarantee that folks did not stay away from their families for days at a time searching for the "best" AGC constant to use in whatever receiver they were designing. And the notion that Art Collins, or (insert legendary name here _____) single-handedly designed & built and approved every part in each radio is a silly myth that those of us in the business don't understand.

Point is... if you don't like the AGC constant, CHANGE IT!! If engineer Joe Blow #1 hadn't selected it to your liking (some 40 years later), and put it into production, then engineer Joe Blow #2 might have! What was "best" for someonedecades ago just might not be best for you today.

Re: repairs. in my previous lifetime I worked all through the 6th -12th grades (and beyond) as a TV/radio bench/field technician. There were many of us working side-by-side in this business. Those who produced, made a good living & survived. Those who didn't are telemarketers today. I also owned my own successful shop while I was in the Air Force (another long, windy story!), and had several folks producing for me. The only thing worse, in my estimation, to a slacker (someone who does shoddy, dishonest work) is the "prima-donna". The primma-donnas I had to deal with would spend 20 hours (@ \$4.00/hour - this was a while back) on a repair job that was worth \$30. "But it's not PERFECT! There are still tubes in the set that don't test at least 70%! It could use a new picture tube also." How long would it have taken YOU to fire this guy in YOUR shop? Imagine YOUR chagrin at being told the repair on your Toyota (worth \$2,000) is going to cost \$4,000! Imagine Mrs. Smith's chagrin at being told her TV worth \$100 costs \$200 to repair.

Point to this diatribe is... repairs are done to restore the operation of a device - not to restore it to 100 point concours for a show. You find a lot of repaired cars on the road, not many "restored" ones. it costs too much \$\$ to restore a 1982 Mercury, but repairs are common. You do, however, find a lot of restored Maseratis and Lamborghinis (in SoCal, at least), they're worth the effort & \$\$\$. I repaired hundreds & hundreds of boatanchors during my early years. I am certain that some of you have a rig I worked on at one time. When you come across the .01 / 600v Orange-drop that has been carefully (& lovingly) soldered over the existing clipped wires onto the existing lugs, you can thank me. YES, thank me that I did an economical repair that gave the BA an extra life. If I had told the customer that the \$20 repair would actually be a \$50 restoration, that unit may well have ended up on the scrap heap. Thank the rest of the folks who did this same thing also - it's one of the reasons that you have a rig to play with (and carp about the crappy tech who did the crappy job on it).

OK, I'm climbing down from the soapbox. If you want to "restore" a unit to perfect, pristine condition, then enjoy. If you just want a nice running unit to play with and use, then enjoy that too. There's lots of

room in this hobby for all points of view - and none are right or wrong. If whatever you're doing will help ensure that my kids & their kids have BAs to play with in the next century, the God-bless you, you're doing a good thing!

73s Don Davis

Date: Sat, 29 Nov 1997 12:50:12 -0500
From: "Thomas A. Adams" <103360.2133@compuserve.com>
To: "INTERNET:boatanchors@theporch.com" <boatanchors@theporch.com>
Subject: Pix file - RT-3/ARN-1
Message-ID: <199711291251_MC2-2A17-7F7@compuserve.com>

Hello Bob Lindgren.

Your attempt to send a pix file to BA brings up a hassle I've had from time to time. I'm not exactly a computer virgin here, but I'm not "Amazing Grace" Hopper either. Perhaps you can enlighten me, off the list.

Please excuse the non-BA content on this, but this is something that I, and probably other BA list folks need to know about.

On several occasions, BA folks have sent me similar images, but I'm damned if I know how to decode 'em! All I get is a screen full of random gibberish.

What format are these pix? JPG? TIF? BMP?

Is there any software you can recommend to decipher them?

I've played with a couple of them with the viewer software that comes with Compuserve WINCIM, but gotten absolutely nowhere.

Is there possibly a hassle in the way that WINCIM handles files that causes a problem?

When images are sent as separate files, clearly marked as to format, I have no problem unpacking them with commonly available viewers, but I have several from BA folks that have taken up permanent residence on my hard disk, some as long as 3 years!

Step by step instructions for dealing with the image you sent would be a VERY big help!

Inquiring minds wanna know...

73's,

Tom, K9TA

Date: Sat, 29 Nov 1997 12:24:08 -0800
From: Brian.Harris@sv.sc.philips.com (Brian Harris)
To: boatanchors@theporch.com
Subject: FS/FT: KWT-6/URC-32 stuff
Message-ID: <000AEA8A.001914@svlima.sv.sc.philips.com>

The recent posts concerning the KWT-6 reminded me of the items below. I will likely will never need them since I don't have one of the transceivers.

1. Balanced Modulator Module - Collins 543 1351 004 (MCN 3020) - this has the two mechanical filters for USB and LSB.
2. United States Air Force Training Command manual containing block diagrams and large foldout schematics
3. USB/LSB Line Amplifier Module - missing its cover, otherwise intact.

I prefer to sell or trade as a lot but will consider separating if necessary.

Brian Harris WA5UEK

Date: Sat, 29 Nov 1997 13:56:39 -0500
From: BEN NOCK <G4BXD@compuserve.com>
To: Multiple recipients of l <boatanchors@sco.theporch.com>
Subject: German Receiver ident ??
Message-ID: <199711291356_MC2-2A0A-5DB1@compuserve.com>

Hi, I have been asked to help in indenting a German =

receiver, its marked E2a, typical light
grey in colour, three knobs, drum type tuning scale, =

marked 0-50, a large green and red indicator, with
place for a frequency chart just right of centre.

Phones connector lower right.

It uses RES094/RE074/RV2P800 tubes.

So, if anyone can shed light on it, its frequency coverage etc, =

I will be most obliged.

cheers, Ben G4BXD.

Date: Sat, 29 Nov 1997 11:31:52 -0800
From: "W6WUH Larry" <rau@wco.com>
To: "boatanchors" <boatanchors@theporch.com>
Subject: Tube tester Fil Voltage
Message-ID: <199711291932.LAA25386@shell.wco.com>

on heavy draw tubes.. you should check the line voltage adjust pot and reset it again AFTER the tube is in and hot...this should compensate for the heavy demands of a big filament...on the transformer.

the line adj feature is part of most hickock tests in the 500 ,600 and 6000 series...

W6WUH

Date: Sat, 29 Nov 1997 14:06:23 -0500
From: don merz <71333.144@compuserve.com>
To: boatanchors@theporch.com
Subject: out 'til 12/3
Message-ID: <199711291408_MC2-2A17-F7FD@compuserve.com>

I am out until Wednesday 12/3. C U Then.
73, Don

Date: Sun, 30 Nov 1997 11:43:58 -0800
From: Scott Robinson <spr@earthlink.net>
To: boatanchors@theporch.com
Subject: To Modify Or Not To Modify
Message-ID: <v03007803b0a76f1455fd@[153.34.139.171]>

Folks,

I work designing electronic equipment for sale. I and my unindicted co-conspirators try very hard to get everything right. Nonetheless, I can see why someone might wish to modify even some of my very own designs, and here are some reasons:

- 1) We goofed. Sure, this happens. A responsible company-which my employer definitely is-will fix this ASAP. Some don't, including IMHO a major software company (whose product is NOT used to write or convey this message at my end) and some major American car companies.
- 2) Better parts become available (certainly the case with BAs)
- 3) Your use is different than the designer anticipated, so the the design is not optimized for your application. The example someone gave of removing the cap across the output transformer primary is a nice example of this. The modifier wanted more audio HF response at some cost in noise; he preferred the audio quality to s/n under difficult QRN conditions. He probably also had a very different speaker than the designer had in mind.

I am frequently tempted to do audio mods because I can make that part of the radio work better and sound better even for voice only purpose. Reducing distortion from 10% to 1% will probalby help intelligibility, as will the flatter frequency response a speaker gives when driven from a low impedance source rather than a very high impedance pentode or beam power tube output stage.

Nevertheless, I only occasionally do this. My R390A will definitely get this treatment, and one old Westinghouse radio got it because the original owner had already modified it once. The Scott 800B got it because it was supposed to be hi-fi, and the power amp design was simply lousy. Same tubes, only a few more resistors, and presto! far less distortion, same gain, same power output.

So there you are, a set of opinions at least partially substantiated by fact.

Regards,

Scott Robinson
spr@earthlink.net

Junque is GOOD for you!

Date: Sat, 29 Nov 1997 11:55:04 -0800
From: "W6WUH Larry" <rau@wco.com>
To: <Ho4bart@aol.com>
Cc: "boatanchors" <boatanchors@theporch.com>
Subject: Re: Don't Modify Morrow's
Message-ID: <199711291956.LAA00727@shell.wco.com>

Hue...my humble opinion... as one who collected morrows and other mobiles for over a decade.. is to leave the darn power supplies alone. There is no earthly reason to need them in a home set up anyway.

Morrow designed and built several AC supplies with speaker for just this purpose.. and while you might have to buy a whole set of radios to obtain it as i did...it saves the original P.S. which are rarer than the radios.. shall i say that again... the morrow(or Multi Elmac for that matter) supplies of any kind are rarer than the radios.. because most guys used readily available surplus vibrator supplies for reciver and xmtr low B+ and a surplus dynamotor for High B+.

I say...build or modify some other Ac supply... the requirements of the Morrows are not difficult to satisfy nor are they even very finicky about voltages... if you keep xmt B+ below 600V max (no load too !)

A great bet is a Heathkit HP-23 ... you will have to put a dropping resistor in the B+ for the transmitter as it will float to 800 volts no load... but other wise it is ideal... and one version lets you chose 6/12V fils and 250or 300 lo B+...the reliability and filtering are first rate.. and it is small. This is what i routinely used to test my Morrow recivers... it is childs play to make up a cable...and the adjustable bias is just what you want for the transmitter... no silly battery.

An Earlier heath AC supply provided~ 600v.. model ?? somebody knows.

There is nothing wrong with running these radios mobile either...so maybe you could trade if need be...

It took me years to pry loose the morrow AC supply.. but there are simpler and better alternative than your plan to "waste" some vintage hardware.

Larry W6WUH

or even better the earlier version

Date: Sat, 29 Nov 1997 18:19:08 -0500 (EST)
From: JOHN_SEHRING.parti@ecunet.org (JOHN SEHRING)
To: boatanchors@theporch.com
Subject: R-390 BCB PROBLEMS
Message-ID: <9711291819.aa02312@pcusa01.ecunet.org>

To: boatanchors@theporch.com

I think the culprit is the 2 RF stages.

Every radio I've had that had 2 RF stages had this problem of overload and/or crossmodulation.

My National NC-183D and Hammar SP-600 had this problem (6BA6 rf, 6BA6 rf, 6BE6 1st mixer) in spades but the National's less expensive, less 'deluxe' brother, the simpler NC-125 (6SG7 rf, 6SB7Y mixer) does not.

None of my Halli's (SX-100 or similar, 6CB6 [or 6DC6] rf, 6AU6 1st mixer) have this problem at all.

So, less is more?

-John Sehring (Fri, Nov 28, 1997 1:37 pm MT @Baker, Montana) UCC WB2EQG

Date: Sat, 29 Nov 1997 16:56:15 -0700
From: "Herbert M. Rosenthal" <herbrose@lobo.net>
To: BoatAnchors <boatanchors@theporch.com>
Subject: FS: ME-9B/U
Message-ID: <3480AB94.188E@lobo.net>

FOR SALE: Multimeter (VOM) ME-9B/U (TS-352/U). \$40, plus shipping.

Fully functional (and accurate) on all scales. THIS one is a classical BoatAnchor!

Of the style and of the era to complement any BA collection. It contains Multiplier Kit MX-815/U which extends the 20,000 ohm/volt scale to 5000 volts DC. The black Bakelite panels are in remarkably good condition, as is the meter glass. It weighs about 13 pounds with batteries! Very heavy steel case; color is gray; it has been stenciled upon, decalled upon, and written upon over the years, to the point that the new owner might want to refinish it. Or leave it as is, for authenticity.

Other identification: Contract AF33(038)20386; Phaostron Co. South

Pasadena, Ca; S/N 13387. Batteries, etc.: (1)BA-30 (D Cell); (3)BA-31 (4.5V Eveready 781, with binding posts-obsolete). I have replaced the BA-31s with three AA holders, each with 3 AA cells, in series. This is a 13.5V drop-in replacement for the original batteries (13.5V) with NO drilling, gluing, etc. The battery compartment legend has been redrawn as original.

Shipping on this will be about \$15-20 from Albuquerque. Herb Rosenthal
W5AN herbrose@lobo.net.

Posted 11-06-97

Date: Sat, 29 Nov 1997 19:05:53 -0500
From: Dan Martin <dmartin@visuallink.com>
To: JOHN_SEHRING.parti@ecunet.org
Cc: boatanchors@theporch.com
Subject: Re: R-390 BCB PROBLEMS
Message-ID: <3480ADE1.124A@visuallink.com>

JOHN SEHRING wrote:

>
> To: boatanchors@theporch.com
>
> I think the culprit is the 2 RF stages.
>
> Every radio I've had that had 2 RF stages had this problem of overload
> and/or crossmodulation.
>
> My National NC-183D and Hammar SP-600 had this problem (6BA6 rf, 6BA6 rf,
> 6BE6 1st mixer) in spades but the National's less expensive, less 'deluxe'
> brother, the simpler NC-125 (6SG7 rf, 6SB7Y mixer) does not.
>
> None of my Halli's (SX-100 or similar, 6CB6 [or 6DC6] rf, 6AU6 1st mixer)
> have this problem at all.
>
> So, less is more?
>
> -John Sehring (Fri, Nov 28, 1997 1:37 pm MT @Baker, Montana) UCC WB2EQG

All:

Yes, less may be more. Maybe that is what the 390A design team was thinking of, in addition to reduced cost. Clarifying my situation, my radio is the A-model and has only one rf stage, unlike the 390. Alas, I think I have a problem here as some 390A owners have responded that their rigs do not exhibit the performance I describe even in the presence of 70 db-plus AM BCB sigs. Please keep your comments coming.

73
Dan

Date: Sun, 30 Nov 97 00:08:26 UT
From: "Allan Fritsche" <fritsche@classic.msn.com>
To: boatanchors@theporch.com
Subject: WTT SB-101
Message-ID: <UPMAIL03.199711300008360209@classic.msn.com>

Hey Gang, my mind has wandered away from the Nationals and I think I would like to play with an SB-101... Anyone like to trade for my HQ-170A-VHF...
Let me know. Talk about wishy washy... That I am.
Al
fritsche@classic.msn.com
KD5CML

Date: Sun, 30 Nov 97 00:06:47 UT
From: "Allan Fritsche" <fritsche@classic.msn.com>
To: boatanchors@theporch.com, "Don L. Davis" <dxguy@earthlink.net>
Subject: Modding the BA's
Message-ID: <UPMAIL03.199711300008350084@classic.msn.com>

Thanks Don, you have probably said it better than anyone on this list in the last two years.

Al
fritsche@classic.msn.com
KD5CML

Date: Sat, 29 Nov 1997 18:22:49 -0600
From: bdhall@ghg.net (Benjamin D. Hall)
To: boatanchors@theporch.com
Subject: The recent to modify or not to modify thread...
Message-ID: <3.0.32.19971129181906.0070d1f4@mailman.ghgcorp.com>

Good evening everyone... Well, at least it is evening here in Houston...

A few comments from my small brain:

I tend to stray away from modifications myself, as I tend to think that Art Collins, James Millen, or insert famous name here, was 100 times the electrical and/or radio engineer than I'll ever be. Unless I understand exactly where the shortcoming is, and how my modification will fix it, I don't do it. While I won't claim knowledge, I am leery of any modification that doesn't include hard before and after data.

However, even in the R-390A's case, all of these radios were made with attention to the bottom line, so I'm happy to install things like fuses, three wire cords, inrush current limiters, and things of that nature that were deemed not needed or weren't available when they were made. But I know exactly what change these modifications will do to a set. And recently, I've got to admit that I've been using a rather beat-up National RCP as a test-bed for playing with AVC constants, increasing the 6V6's bypass capacitor value, etc...

Bottom line, my feeling is that your radio is your radio, and you are free to do with it what you want, keeping in mind that these radios are the last of their kind...

73,
Ben

Benjamin D. Hall, KD5BYB, Engine and radio collector / operator
extraordinaire. Located in Houston, Texas, USA.
e-mail: BDHall@ghg.net web:<http://www.ghgcorp.com/bdhall>

Date: Sat, 29 Nov 1997 18:44:19 -0500
From: Robert Lawson <lawson_r@popmail.firn.edu>
To: boatanchors@theporch.com, baswaplist@foothill.net
Subject: Tubes FS
Message-ID: <3480A8D3.1F3F@popmail.firn.edu>

Fellow BA'ers,

I have in excess some NOS (in original boxes) military 12AX7WA's made by General Electric that I'd like to sell. Five to a tube case for \$37.50 conus.

Also a Dumont 3RP1A D11430A 3 inch scope CRT in it's original box.
Looks new, make offer and I'll probably send it to you plus shipping.

Tnx Rob W4RL Pensacola Florida

Date: Sat, 29 Nov 1997 19:19:55 -0600 (CST)
From: John England <jengland@mail.tds.net>
To: boatanchors@theporch.com
Subject: Gonset Communicator P.S. Diagram
Message-ID: <199711300119.TAA27210@mail.tds.net>

Hi Gang:

I am trying to repair a boatanchor for a disabled friend so he can get on six meter AM. I am in need of a diagram for a Yellow CD Gonset Communicator specifically the power supply. It has no number like I, II, or III so I am making an assumption it is a model I. It has 2 ea 12X4 tubes and a 12 Volt Vibrator. No other numbers of id on supply. I'll be happy to pay for copying and postage. Tnx in advance for any help.

73 de John K4RIG

Date: Sat, 29 Nov 1997 17:39:10 -0800
From: Edward Zeranski <ejz@nosc.mil>
To: spr@earthlink.net
Cc: boatanchors@theporch.com
Subject: Re: To Modify Or Not To Modify(or just fix the damn thing)
Message-ID: <3.0.1.32.19971129173910.0070eed0@marlin.nosc.mil>

At 11:43 AM 11/30/97 -0800, you wrote:

>Folks,

>

>I work designing electronic equipment for sale. I and my unindicted
>co-conspirators try very hard to get everything right. Nonetheless, I can
>see why someone might wish to modify even some of my very own designs, and
>here are some reasons:

>

>2) Better parts become available (certainly the case with BAs)

>

>3) Your use is different than the designer anticipated,

Yep! Sooner or later ya gotta stop designing and deliver the product.

Having been involved with comm gear for a day or two I have to admit to seeing a goodly share of 'field' and 'engineering' changes. Even 'dead bugged' a few myself when working in B.F. Egypt or someplace to get things

going. There is a HeathKit listserver that I subscribe to that posted Heath Tech Bulletins and years ago I used to get similar notes from Collins and NASA.... Stuff gets changed once it hits the Real World. Some of the BA stuff I have isn't pretty and some was modded by some previous owner. Not all were successful but somebody was trying! My opinion is that if only the primo stuff gets saved and folks get too prissy we will lose a chance to look at the culture that existed when BAs were tools not Sainted Icons. Geeze, kind of like an anthropologist digging only for the Kings stuff and throwing aside the carpenters and smiths tools! All those mods, even the ps poor ones, started out as somebodies 'good' idea. Ok! Ok! I know! Rant! Rant! Rant! Well, guess I'll go out back and play with a kinda scruffy RAK.

Ed Zeranski This is a private opinion or statement.
home email: ezeran@cris.com

Date: Sat, 29 Nov 1997 20:39:35 -0500 (EST)
From: MNHopkins@aol.com
To: Boatanchors@theporch.com
Subject: kill the heater to QSY?
Message-ID: <971129203934_2073261087@mrin52.mail.aol.com>

Frank Jones talk evolks not only the Super Gainer but the notorious Crystal Cracker, a push-pull two-tube rig so given to excess crystal current that one put a panel lamp in series with the xtal to ground and tuned for minimum billiance across the Biley. Such rigs were given to the generation of harmonics despite the tendency of a push-pull to cancel even orders, we are told.

Now the other point -- can one really kill the heater of one of the push-pull tubes and operate at half the frequency of the previous doubling? Has anyone here actually done that?

73 de ab5L, michael in dallas, student of Tecraft and International (ICM) ham products and mementoes of Six Meters' Golden Age: 1957-58
Michael Hopkins
Box 226841
Dallas, TX 75222 MNHopkins@AOL.com

Date: Sat, 29 Nov 1997 20:39:41 -0500 (EST)
From: MNHopkins@aol.com

To: Boatanchors@theporch.com
Subject: Collins 'Joes know PT0s
Message-ID: <971129203940_1794569247@mrin83.mail.aol.com>

Response to my inquiry about a list of PT0s from Collins stuff, found wanting as given by Electric Radio, was swift and erudite:

Here is a digest:

WA5JCI, Spenser, told me mine was from a ARR-15 and supplied techno data on same. Spenser is 6M WAS #490, by the way, a feat that cannot be ignored by we SMIRK types.

KD6RNQ, Rudy, supplies a picture of the ARR-15 at:

<http://.wenet.net/~planenut/arr15.htm>

N5OFF, Tom (as suspicious a call as one will ever see -- The Old Man?) topped Electric Radio by 2X with is own list of 46 separate Collins PT0s with applications -- impressive.

finally, Collins Monthly Journal guru Dave, W3BJZ, recalls Abbot and Costello: When Bud and Lou are going thru a haunted house, a ghoul follows them -- Abbot wordlessly shows the fiend to Bud who says "How much do you charge to haunt a house?" The monster thoughtfully answers: "How many rooms?"

Thus it was with Dave who has an official Collins Archive number and asked "How many copies?"

Thanks to all you latter-day Ronald Reagans of whom it is said, "If you ask him what time it is, he'll tell you how to build a watch."

73 de ab5L, michael in dallas, student of Tecraft and International (ICM) ham products and mementoes of Six Meters' Golden Age: 1957-58

Michael Hopkins
Box 226841
Dallas, TX 75222 MNHopkins@AOL.com

Date: Sat, 29 Nov 1997 19:31:59 -0600
From: George Humphrey <gah@koyote.com>
To: boatanchors@sco.theporch.com
Subject: Antenna Tuner Help Needed
Message-ID: <1.5.4.32.19971130013159.013bd69c@mail.koyote.com>

BAers,

I recently picked up a grey waterproof box with two large porcelan feedthrus and a cable clamped hole. Inside the box is a nameplate that identifies the unit as an Antenna Tuning Housing made for the US Civil Aeronautics Administration, Type CA-573 under contract CCA14114, Serial # 88 by the Airplane & Marine Direction Finder Corp. in Clearfield, PA.

It appears to be a jim dandy HF? antenna tuner with both High Freq and Low Freq vernier tuner caps. It also has some rather large air core coils. I'm guessing it would handle a large wattage rig.

Can anyone identify the box, age, usage and or have operating instructions or book?

Thanks much and 73s
George KC5WBV
gah@koyote.com

Date: Thu, 27 Nov 1997 10:48:31 -0500
From: Thomas Bowes <bowes@tir.com>
To: boatanchors@theporch.com
Subject: Heath IB-1100 info needed
Message-ID: <347D964F.2E8E@tir.com>

OK, BA folks, I'm in need of some help with a friend's IB-1100 frequency counter. Might any of you have a manual for this thing which you would be willing to copy? I would be happy to cover any expenses involved. I would also add that even though I am at a loss as to who else to ask I will defend the right to post this request for info on a mostly solid state piece of gear to Boatanchors since:

- 1) The counter will be used in conjunction with an Apache and a BC-610.
- 2) It has nixie tubes in the display!:)>

Best Wishes
--
"Tom"

Thomas Bowes

KK8M
5529 25 Mile Road
Shelby Twp., Michigan 48316

Date: Sat, 29 Nov 1997 23:07:29 -0500
From: dave metz <metzd@cfw.com>
To: boatanchors@theporch.com
Subject: transformer question
Message-ID: <2.2.32.19971130040729.00729210@milo.cfw.com>

At the risk of asking too basic of a question.....

I will shortly be making a power supply for a BC1004. I recently finished junking a TEK511 scope. (Sorry guys, it was really a junker) This has a nice main transformer to say the least. No problem to get the 6.3v supply. My question is the B+. This transformer seems to have two identical center tapped windings that are 275v from each side to the CT. So my question is : I don't know the miliamp capacity of each winding but being equal output, could one parallel these secondaries to gain the current rating of each? I have connected secondaries in series to add the voltage but sort of wondered if I am treading on voodoo electronics to parallel them for current capacity? My curiosity is wondering if they would be out of phase and burn it up---Quickly!

In advance, thanks for any advice.

73's dave

Date: Sat, 29 Nov 1997 20:19:21 -0800
From: "W6WUH Larry" <rau@wco.com>
To: "boatanchors" <boatanchors@theporch.com>
Subject: VIKING MODS- ROAD TO HELL
Message-ID: <199711300420.UAA15285@shell.wco.com>

Well... i guess I did it again !

it was pointed out to me privately that the max audio freq. allowable for Am below 220Mhz is probably 3 kc!

the rules apparently now read " in accordance with good amatuer practice".. they used to spell it out as 3KC audio or 6 kc 'channel' width in other words.

so the advice i gave the fellow about modifying his viking with couplings capsas big as .015... is just an invitation to traispe down the rosy path to radio hell.

the stock value is .003 ... and prudence dictates that if you deviate from that value in order to get more bass response.. you have to make sure the highs are cut... so you certainly don't want to ditch the cap across the modulation transformer unless you specifically design in a hi -cut using a tone control type circuit...

the vaues of the r/c can be arrived at through some trial and error...

So no matter what other people do to thier rigs , and no matter what you hear on the air... the audio response .. at the upper end at least.. is prettty much what god and the FCC intended.

larry W6WUH

Date: Sat, 29 Nov 1997 23:35:58 -0500 (EST)
From: kim herron <kherron@vixa.voyager.net>
To: 103360.2133@compuserve.com
Cc: boatanchors@theporch.com
Subject: Re: Pix file - RT-3/ARN-1
Message-ID: <199711300435.XAA27743@vixa.voyager.net>

Hi Tom,
>Hello Bob Lindgren.
>
>Your attempt to send a pix file to BA brings up a hassle I've had from time
>to time.
> All I get is a screen full of random
>gibberish.

>Step by step instructions for dealing with the image you sent would be a
>VERY big help!

 You can always do waht I always do, Delete the whole MESS!!!

Kim Herron W8ZV
kherron@voyager.net or kherron@vixa.voyager.net
1-616-677-3706

Date: Sat, 29 Nov 1997 22:22:01 -0600
From: "Jim Zellmer" <zellmer@raccoon.com>
To: "boatanchors digest" <boatanchors@sco.theporch.com>,
 "The Drake List" <DRAKE-L@fablotz.min.net>

Subject: Question aboaut T-4XB

Message-ID: <199711300729.BAA04945@slip1.raccoon.com>

I powered up the Drake B-line after a several month haitus and noticed a problem with the t4xb that I had not noticed before. I tuned the transmitter up on 40 meters and out was reasonable. Then I noticed that the relay was not releasing from the transmit mode. I tried to adjust the Vox per the manual and noticed no improvement. I turned the thing off for a while while I looked over the manual and checked the wiring in the microphone. I then decided to see if the problem was just the VOX or would repeat it self on PTT. When I turned on the radio and cycled the PTT, the relay hung for a second or so. After the next cycle, the relay hung for a couple of seconds. I repeated the cycling several times until the relay would not release at all.

I checked V10, 6EV7, the vox tube on my Hickook 6000 and it looks ok. I pulled the bottom off of the radio and checked the resistances around V10. They were reasonable. I gave the transmitter a quick visual inspection and noticed several burnt and cracked resistors in the line feeding the cathods of V5 and V6, the 6JB6 finals. R32 & R33 are 15 ohm 1 watt resistors and were cracked and checking about 30 ohms each. R36, a 2.7 ohm resistor, (a meter shunt?) was also burnt and cracked. There was alot of current running down this line.....Any ideas out in boat anchor land?

73 ES GOD BLESS U ES URS

JIM ZELLMER, KA0VSL

End of BOATANCHORS Digest 1803
